

HBV infection, but in controlling the difficult problem of HBV infection in medical personnel working in high-risk areas.

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## NO OPIUM FOR PAIN—A THREATENING MEDICAL CRISIS

TURKEY's decision on July 1, 1974, to set aside its Opium Pact with the United States by resuming the cultivation of the opium-poppy flower, from which illegal heroin and medicinal pain-killing opiate drugs are extracted, has provoked not only angry Congressional reaction but also critical editorial comment in this country. The political imperatives of this problem are current. The *Christian Science Monitor* described Turkey's act to lift the ban on the cultivation of the opium poppy as being a big disappointment and setback for the United States.<sup>1</sup> The *Wall Street Journal* predicted, on August 22, 1974: "In fact, if Turkey doesn't lose its economic and military aid from the invasion of Cyprus, it may well lose it for revoking its ban on the cultivation of the opium poppy."<sup>2</sup> Indeed, after the revocation of the opium-poppy ban, the House in Washington was prepared to cut off aid if Turkey failed to prevent the flow of opium from poppies. Subsequently, however, the Turkish invasion of Cyprus became the principal reason for halting United States aid to Turkey. On the other side of the coin, Turkey has accused the United States of bossism in trying to dictate what Turkey should or should not cultivate.

All this controversy has completely overshadowed the fact that this Opium Pact of 1971 had brought to light and dramatically increased an existing serious shortage of pain-killing opiate drugs in the United States. In the event of a major epidemic or other national emergency this critical shortage of codeine, morphine and medicinal opiate drugs in the United States could easily cause great suf-

fering, with the American public being deprived of its right to these important medicines for the relief of pain. Even if Turkey were persuaded to export its entire newly planted 1975 opium yield to the United States, which appears to be unlikely at this point of time, it would not resolve the critical shortage of medicinal opium in this country. Turkey's average yearly opium output during the five years before its ban on the cultivation of the opium poppy was only 104,144 kg. This quantity of opium is less than half the estimated 284,644-kg yearly opium needs of the civilian population of the United States at the time of the poppy ban. The 1974 opium requirement of the American public presumably would even be higher as improved standards of medical care increase the demands for these drugs. These estimates of opium production and requirements must be considered reasonably accurate. They had been calculated and assigned as a quota to Turkey and the United States by the International Narcotic Control Board in Geneva,<sup>3</sup> a subdivision of the United Nations.

This crisis had its beginning on June 17, 1971, when President Nixon informed the Congress of the United States of his comprehensive plan to combat the heroin-addiction epidemic in this country.<sup>4</sup> The President called for an international effort to end the cultivation of the opium-poppy flower from which the highly addictive drug, heroin, and the opiate drugs, such as codeine, are extracted. Accordingly, Turkey, which had been the chief producer of illegal heroin and an important producer of medicinal raw opium for the American market, was pressured to sign the United States—Turkey Opium Pact of 1971. In this Pact, Turkey agreed to stop the cultivation of the opium poppy for an increase of \$35.7 million in foreign aid. The result was that no medicinal raw opium from Turkey has reached the American market since that time. The American pharmaceutical companies that process raw opium for medical use have had little success in acquiring additional raw material elsewhere. The other countries that cultivate the opium poppy for medical use have not been able to supply the worldwide demand for their product. In fact, in every year but one since 1964, world consumption of opium has exceeded world production.<sup>5</sup> The International Narcotic Control Board estimated a worldwide opium deficit of 184,000 kg for the year 1973.<sup>6</sup>

The civilian stores of essential opiate drugs in the United States are now perilously low. Toward the end of 1973, the three American companies that process raw opium for medical use in the United States had less than a four-month inventory on hand as compared with a desired 18-month supply. Keeping in mind that the friendly neighborhood hospital, drugstore and doctor's office have only minimal stores of these essential narcotic drugs in their possession, these three companies petitioned the federal government for immediate emergency aid to keep them from completely exhausting their remaining opium inventory in 1974.<sup>5</sup> In response, the federal government authorized the release on December 31, 1973 of 29,864 kg of its strategic military opium stockpile for use in case of

a major national emergency.<sup>7</sup> Congress rejected the President's request that the entire emergency opium stockpile be released. It was hoped that this action would enable wholesale druggists to supply the civilian population's needs over a period of several years. This hope is purely wishful thinking. The 29,864 kg of opium released from the government's emergency opium stockpile for civilian use is short by at least an incredible 255,000 kg the estimated opium requirement of the American public for a single year. It is important to note that codeine, which is synthesized from morphine, accounts for about 90 per cent of the medicinal opium used in the United States.<sup>5</sup> There is no medicine that combines codeine's pain-killing, cough-relieving and sedative effect. Industry and academic sources are not optimistic about their ability to develop synthetic agents to replace codeine within the foreseeable future.

Even more incredible is the news-media revelation that the United States' total remaining emergency stockpile of opium and opiate drugs, after public release of 30,000 kg, is only 34,500 kg. This quantity of 34,500 kg of opium, which is meant to supply the entire emergency civilian and military needs of the United States, with its 1974 estimated population of 213,110,000, is actually less than the estimated yearly opium requirement of Belgium, with a population of only 9,845,000. As the matter stands today, the specter of no opium for pain in the United States is well founded. In the event of a major epidemic or other national emergency, this critical shortage of pain-killing opiate drugs could easily cause a medical catastrophe. Under these circumstances, doctors and nurses in hospitals are about as useful as a fleet of new ambulances with little or no gasoline in their tanks.

There is obviously only one long-term solution to the present medicinal opium crisis in the United States: the United States must become self-sufficient in opium. The United States must plant, cultivate and harvest the opium poppy for its own use. It has been stated that a tract of 20 square miles (52 km<sup>2</sup>) will satisfy the medical needs of the United States.<sup>8</sup> The Opium Poppy Control Act of 1942 permits the domestic production of the opium poppy for medical use. The United States Department of Agriculture has proved that it can be grown commercially in many parts of the country.<sup>9</sup> The new "poppy-straw" method of extracting opium from the opium-poppy flower has met with strong approval by United Nations officials who are involved in the fight against the illicit heroin trade.<sup>10</sup> Instead of extracting the opium gum by lancing the poppy pod, the green pod is allowed to dry on the plant in the field for 15 days. The entire plant is then harvested. Narcotic officials assert that this harvesting can be easily mechanized. They also say that the chemical process of extracting heroin from the poppy straw is so complex that it is unlikely traffickers in illicit heroin would be able to handle it. Fortunately, it is virtually impossible to cultivate the opium poppy secretly for illicit use. Not only does the flower have an unpleasant fragrance, which increases as it matures, but the fragrance is easily identified. By spring, the opium poppies have grown to a height of about 90 cm,

their stems emerging about 30 cm above the highest leaves. They then begin to flower — white, pink or purple. The flowers are delicate and shaped like tulips.

The American Medical Association is aware of the threatening medicinal opiate crisis in the United States. Accordingly, it recently urged President Ford to help the pharmaceutical companies procure more opium for medicinal purposes from the world market.<sup>11</sup> It also urged that another type of poppy — *Papaver bracteatum* — be cultivated in the United States in sufficient quantity to make the nation independent of outside sources. This poppy yields a toxic alkaloid called thebaine. It is a chemical that can be converted to codeine, a drug of low addiction potential, and cannot by any known process be converted to morphine or heroin.

Unfortunately, *P. bracteatum* also yields oripavine, a phenolic alkaloid that is claimed to be several thousand times more addicting than heroin.<sup>8</sup> If the claims are true, its importation and cultivation in the United States would obviously be inadvisable.

If the news media are correct, the government has now been offered the opportunity to blunt the heroin epidemic and replenish the medicinal opium needs of the United States at a modest cost. Representative Lester L. Wolff, the chairman of the House narcotic subcommittee, is quoted as saying that the rebels in the Shan states of Burma have offered to sell the United States 400,000 kg of opium for only \$12 million (\$30 per kilogram).<sup>12</sup> The Shan rebels are important producers of raw opium for the traffickers in illicit heroin. The opium farmer will sell to the highest bidder—that is his business. Opium is sold cheap at its source where it is grown in the contiguous four-country mountainous areas of Northern Thailand, Laos, the Shan states of Burma and Yunnan province of mainland China. Whatever the price, the price is right!

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